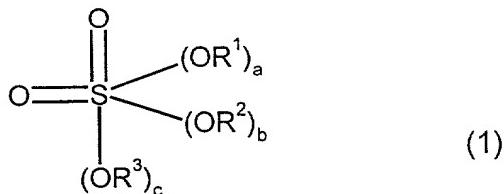


WHAT IS CLAIMED IS:

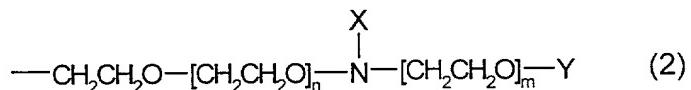
1. A mixture of sulfuric esters of formula (1)



wherein

5 R¹ is an aliphatic radical having 1 to 30 carbon atoms,

R² is a radical of formula (2)



wherein

n is an integer from 0 to 30,

10 m is an integer from 1 to 29,

X is an aliphatic radical having 4 to 24 carbon atoms, and

Y is H or SO₂(OM), where M represents hydrogen, alkali metal, ammonium, mono-, di-, tri-, or tetra(C₁-C₆-alkyl)ammonium, or mono-, di-, tri-, or tetra(C₂-C₆-alkanol)ammonium ions,

15 R³ is a radical of formula (3)



wherein

p is an integer from 4 to 35,

R⁴ is H, methyl, ethyl, phenyl, or mixtures of H and methyl, and

20 Z is H, methyl, ethyl, or SO₂(OM), where M represents hydrogen, alkali metal, ammonium, mono-, di-, tri-, or tetra-(C₁-C₆-alkyl)ammonium, or mono-, di-, tri-, or tetra(C₂-C₆-alkanol)ammonium ions, and

a, b, and c are identical or different and are 0, 1, or 2, with the proviso that

a+b+c is 2,

obtained by reacting sulfonyl chloride with a mixture of the alcohols R¹OH,

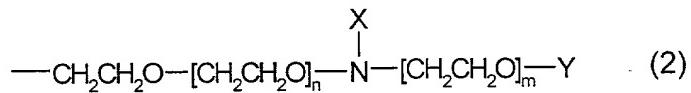
R²OH, and R³OH, wherein R¹, R², and R³ have the same meanings as for

- 5 formula (1) except that Y is exclusively hydrogen and Z is hydrogen, methyl, or ethyl.

2. A mixture of sulfuric esters according to Claim 1 wherein

R¹ is an aliphatic radical having 4 to 30 carbon atoms,

R² is a radical of formula (2)



wherein

n is an integer from 0 to 10,

m is an integer from 1 to 10,

X is an aliphatic radical having 12 to 24 carbon atoms, and

15 Y is H or SO₂(OM), where M independently represents hydrogen, alkali metal, ammonium, mono-, di-, tri-, or tetra(C₁-C₆-alkyl)ammonium, or mono-, di-, tri-, or tetra(C₂-C₆-alkanol)ammonium ions,

R³ is a radical of formula (3)



wherein

p is an integer from 3 to 35,

R⁴ is H or methyl, and

25 Z is H, methyl, ethyl, or SO₂(OM), where M independently represents hydrogen, alkali metal, ammonium, mono-, di-, tri-, or tetra(C₁-C₆-alkyl)ammonium, or mono-, di-, tri-, or tetra(C₂-C₆-alkanol)ammonium ions, and

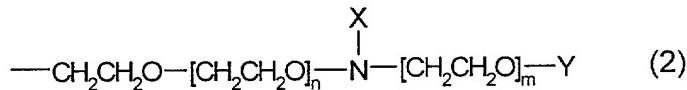
a, b, and c are identical or different and are 0, 1, or 2, with the proviso that

a+b+c is 2.

3. A mixture of sulfuric esters according to Claim 1 wherein

R¹ is an aliphatic radical having 8 to 20 carbon atoms,

5 R² is a radical of formula (2)



wherein

n is an integer from 0 to 5,

m is an integer from 1 to 5,

10 X is an aliphatic radical having 16 to 22 carbon atoms, and

Y is H,

R³ is a radical of formula (3)



wherein

15 p is an integer from 9 to 22,

R¹ is H, and

Z is H, and

a, b, and c are identical or different and are 0, 1, or 2 with the proviso that

a+b+c is 2.

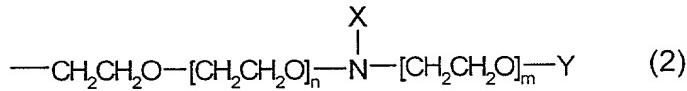
20. 4. A process for preparing a mixture of sulfuric esters according

to Claim 1 comprising reacting sulfonyl chloride with a mixture of the

alcohols R¹OH, R²OH, and R³OH, wherein

R¹ is an aliphatic radical having 1 to 30 carbon atoms,

R² is a radical of formula (2)



25

wherein

n is an integer from 0 to 30,
 m is an integer from 1 to 29,
 X is an aliphatic radical having 4 to 24 carbon atoms, and
 Y is H, and

5 R³ is a radical of formula (3)



wherein

p is an integer from 4 to 35,
 R⁴ is H, methyl, ethyl, phenyl, or mixtures of H and methyl, and
 10 Z is H, methyl, or ethyl.

5. A process according to Claim 4 wherein 3 mol of the mixture of the alcohols R¹OH, R²OH, and R³OH are reacted with 1.5 to 2.5 mol of sulfuryl chloride.

6. A process according to Claim 4 wherein the alcohols R¹OH, 15 R²OH, and R³OH are used in the quantity ratios

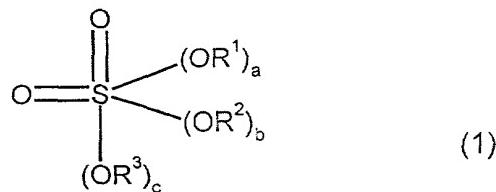
R¹OH 10 to 40 mol%

R²OH 20 to 80 mol%, and

R³OH 10 to 40 mol%,

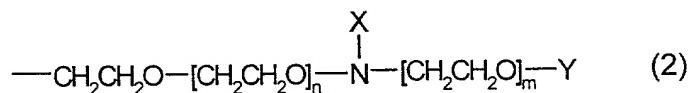
the amounts of the three alcohols totaling 100 mol%.

20 7. A sulfuric ester of formula (1)



wherein

R¹ is an aliphatic radical having 1 to 30 carbon atoms,
 R² is a radical of formula (2)



wherein

n is an integer from 0 to 30,

m is an integer from 1 to 29,

5 X is an aliphatic radical having 4 to 24 carbon atoms, and

Y is H or $\text{SO}_2(\text{OM})$, where M represents hydrogen, alkali metal, ammonium, mono-, di-, tri-, or tetra($\text{C}_1\text{-C}_6$ -alkyl)ammonium, or mono-, di-, tri-, or tetra($\text{C}_2\text{-C}_6$ -alkanol)ammonium ions,

R^3 is a radical of formula (3)



10 wherein

p is an integer from 4 to 35,

R^4 is H, methyl, ethyl, phenyl, or mixtures of H and methyl, and

15 Z is H, methyl, ethyl, or $\text{SO}_2(\text{OM})$, where M represents hydrogen, alkali metal, ammonium, mono-, di-, tri-, or tetra($\text{C}_1\text{-C}_6$ -alkyl)ammonium, or mono-, di-, tri-, or tetra($\text{C}_2\text{-C}_6$ -alkanol)ammonium ions, and

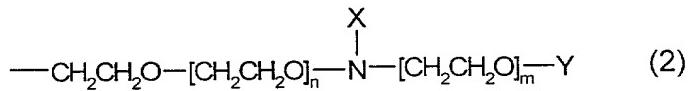
a, b, and c are identical or different and are 0 or 1, with the proviso that

$a+b+c$ is 2.

20 8. A sulfuric ester according to Claim 7 wherein

R^1 is an aliphatic radical having 4 to 30 carbon atoms,

R^2 is a radical of formula (2)



wherein

25 n is an integer from 0 to 10,

m is an integer from 1 to 10,

X is an aliphatic radical having 12 to 24 carbon atoms, and
 Y is H or $\text{SO}_2(\text{OM})$, where M independently represents
 hydrogen, alkali metal, ammonium, mono-, di-, tri-, or
 tetra($\text{C}_1\text{-C}_6$ -alkyl)ammonium, or mono-, di-, tri-, or tetra($\text{C}_2\text{-C}_6$ -
 5 alkanol)ammonium ions,

R³ is a radical of formula (3)



wherein

p is an integer from 3 to 35,

R⁴ is H or methyl, and

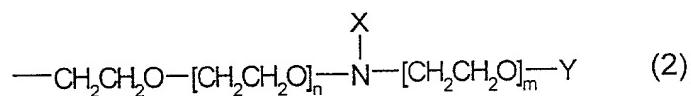
Z is H, methyl, ethyl, or $\text{SO}_2(\text{OM})$, where M independently represents hydrogen, alkali metal, ammonium, mono-, di-, tri-, or tetra($\text{C}_1\text{-C}_6$ -alkyl)ammonium, or mono-, di-, tri-, or tetra($\text{C}_2\text{-C}_6$ -alkanol)ammonium ions, and

a, b, and c are identical or different and are 0 or 1, with the proviso
 that a+b+c is 2.

9. A sulfuric ester according to Claim 7 wherein

R¹ is an aliphatic radical having 8 to 20 carbon atoms,

R² is a radical of formula (2)



wherein

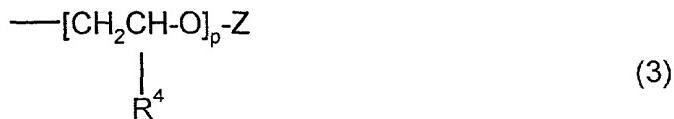
n is an integer from 0 to 5,

m is an integer from 1 to 5,

X is an aliphatic radical having 16 to 22 carbon atoms, and

25 Y is H,

R³ is a radical of formula (3)



wherein

p is an integer from 9 to 22,

R¹ is H, and

5 Z is H, and

a, b, and c are identical or different and are 0 or 1, with the proviso that a+b+c is 2.

10. An organic or aqueous-organic formulation comprising 25 to 70% by weight of a mixture of sulfuric esters according to Claim 1.

10. An organic or aqueous-organic formulation according to Claim 10 wherein the organic component of the formulation comprises one or more organic solvents selected from the group consisting of mono-, di-, and oligoethylene glycols, oligopropylene glycols, and oligoethylene/propylene glycols, and mono- and diethers thereof.

15. An organic or aqueous-organic formulation comprising 25 to 70% by weight of a mixture of sulfuric esters according to Claim 7.

13. An organic or aqueous-organic formulation according to Claim 12 wherein the organic component of the formulation comprises one or more organic solvents selected from the group consisting of mono-, di-, and oligoethylene glycols, oligopropylene glycols, and oligoethylene/propylene glycols, and mono- and diethers thereof.

14. A method comprising dyeing nitrogenous fiber materials in the presence of an auxiliary wherein the auxiliary is a sulfuric ester according to Claim 1.

25. A method according to Claim 14 wherein the dyeing is carried out with an acid dye, a 1:1 metal complex dye, a 1:2 metal complex dye, a chromium dye, or mixtures thereof.

16. A method comprising dyeing nitrogenous fiber materials in the presence of an auxiliary wherein the auxiliary is a sulfuric ester according to Claim 7.

17. A method according to Claim 16 wherein the dyeing is
5 carried out with an acid dye, a 1:1 metal complex dye, a 1:2 metal complex dye, a chromium dye, or mixtures thereof.

18. A method comprising dyeing nitrogenous fiber materials in the presence of an auxiliary wherein the auxiliary is a formulation according to Claim 10.

10 19. A method according to Claim 18 wherein the dyeing is carried out with an acid dye, a 1:1 metal complex dye, a 1:2 metal complex dye, a chromium dye, or mixtures thereof.

15 20. A method comprising dyeing nitrogenous fiber materials in the presence of an auxiliary wherein the auxiliary is a formulation according to Claim 12.

21. A method according to Claim 20 wherein the dyeing is carried out with an acid dye, a 1:1 metal complex dye, a 1:2 metal complex dye, a chromium dye, or mixtures thereof.

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